HPV Vaccine: Overcoming Barriers, Optimizing Care, Immunizing On Time

Coulee Region Immunization Symposium
Raj Naik, MD, FAAP
Department of Pediatrics
Gundersen Health System





I have no financial disclosures or conflicts of interest and will not discuss any treatments that are not approved by the FDA





Objectives

- Identify the common barriers to HPV vaccination and opportunities to improve HPV vaccine rates
- Describe how to systematically improve HPV vaccine rates by: improving access, developing standing orders, standardizing workflows and scheduling, and developing a system for alerts, reminders, and recall
- Discuss the importance of a strong provider recommendation in family acceptance of HPV vaccine including C-A-S-E technique or motivational interviewing





Gundersen Health System: Serving Western Wisconsin, Southeastern Minnesota and Northeastern Iowa





Without vaccination, annual burden of genital HPV-related disease in U.S. *females*:

4,000 cervical cancer deaths
10,846 new cases of cervical cancer

330,000 new cases of HSIL: CIN2/3 (high grade cervical dysplasia)

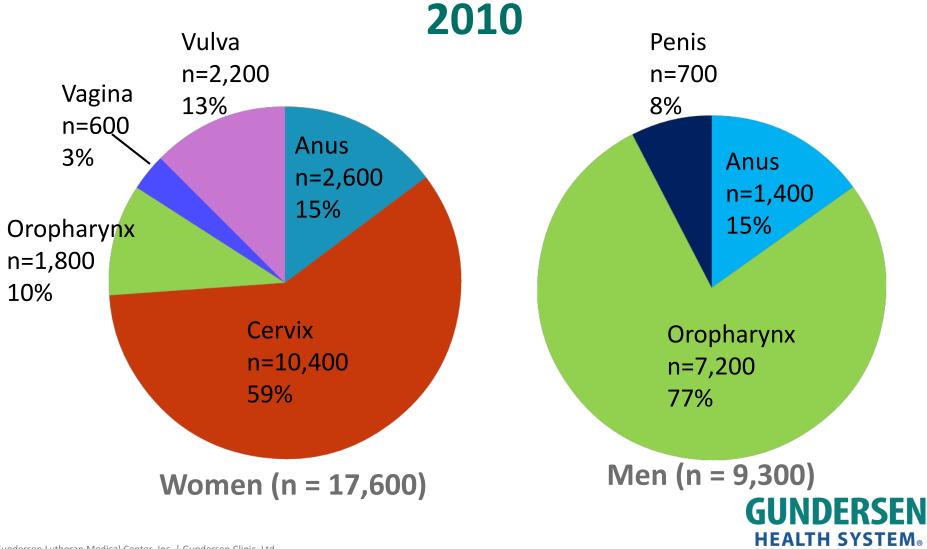
1 million new cases of genital warts

1.4 million new cases of LSIL: CIN1 (low grade cervical dysplasia)

3 million cases and \$7 billion



Why HPV Vaccine is important: New cancers caused by HPV per year in United States 2006-



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Barriers to HPV Vaccination

- Missed Opportunities
- Vaccine Hesitancy
 - Patient/Family Hesitancy
 - Health Care Provider Hesitancy
- Lack of systematic continuous improvement processes





Top 10 Interventions

- 1. Requiring vaccination records at initial appointment
- 2. Reviewing vaccination status at all visits
- 3. Vaccinating at acute visits
- 4. Integrating registry into daily workflow
- 5. Implementing a recall system
- Implementing standing orders for routing and 'shot only' visits
- 7. Utilizing non-confrontational communication with parents
- Clinician and staff training on vaccine office systems and communication strategies
- 9. Ensuring accurate patient lists
- 10. Using data and rapid cycle testing to continuously improve



How to Overcome Missed Opportunities: Individual HCP

- Immunize at every visit type
 - Require records, check immunization status at every visit including system, registry, school data
 - Immunize at any visit
 - Health maintenance visits
 - Acute care visits
 - Visits for chronic care
 - Become familiar with true contraindications for vaccination
 - True contraindications are very rare



How to Overcome Missed Opportunities: System-based

- Optimize access to care
- Standardize scheduling processes to make sure the entire series is completed
- Use alert, reminder, recall systems





How to Overcome Missed Opportunities: System-based

Access

- Create standing orders and policies for "vaccine only" visits
- Consider expanded hours (beyond typical business hours)
- Optimize support and provider staffing
 - Match supply and demand
- Collaboration with other providers of vaccines
 - Local Health Department
 - Pharmacies
 - School Clinics





How to Overcome Missed Opportunities: System-based

- Start HPV vaccine at age 9 years
 - For some families eliminates the concerns about sexual transmission
 - Allows more opportunities to complete at an earlier age
- Standardize scheduling processes
 - Helpful for follow-up doses
- Alerts, Reminders, Recall
 - Develop system(s) to identify children who need immunizations
 - Staff protocols
 - Post-cards
 - Electronic
 - State immunization registries
 - Centralized, systematic processes





How to Overcome Missed Opportunities

Patient reminder and recall interventions to improve immunization rates (Review)

Jacobson Vann JC, Jacobson RM, Coyne-Beasley T, Asafu-Adjei JK, Szilagyi PG

Cochrane Database of Systematic Reviews 2018, Issue 1. Art. No.: CD003941. DOI: 10.1002/14651858.CD003941.pub3.

www.cochranelibrary.com





Vaccine Hesitancy

- WHO Definition
 - Vaccine hesitancy refers to delay in acceptance or refusal of vaccines despite availability of vaccination services. Vaccine hesitancy is complex and context specific varying across time, place and vaccines. It includes factors such as complacency, convenience and confidence.

http://www.who.int/immunization/programmes system
s/vaccine hesitancy/en/

https://www.cdc.gov/vaccines/hcp/conversations/conv-materials.html





Patient-Family Hesitancy

- Fear of pain
- Needle phobia
- General vaccine myths
- Misconceptions and myths specific to HPV vaccine



Health Care Provider Hesitancy

- Health care provider misconceptions
- Lack of knowledge and training to dispel myths
- Fear of controversy
- Concerns about the lack of time to spend on vaccine counseling



- Needle phobia-Fear of Pain
 - Staff training to alleviate anxiety
 - Protocols for pain relief

Interventions for Individuals With High Levels of Needle Fear Systematic Review of Randomized Controlled Trials and Quasi-Randomized Controlled Trials

C. Meghan McMurtry, PhD, C Psych,*†‡ Melanie Noel, PhD,§
Anna Taddio, BScPhm, MSc, PhD, || ¶ Martin M. Antony, PhD, C Psych,#
Gordon J.G. Asmundson, PhD, RD Psych,**
Rebecca Pillai Riddell, PhD, C Psych,¶††‡‡
Christine T. Chambers, PhD, R Psych,§§|| || Vibhuti Shah, MD, MSc,¶¶##
and HELPinKids&Adults Team

Clin J Pain. 2015 Oct; 31(Suppl 10): S109–S123



- Communication style influences parental choices regarding vaccines
- Multiple studies have demonstrated that health care provider recommendation and attitude regarding childhood vaccines matters
- Discuss the vaccines as part of the routine not as an a optional activity
- Make sure that all levels of support staff deliver the same message
- Present the discussion with a positive attitude
- Persist in discussing at subsequent visits





PEDIATRICS

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Vaccine Attitudes, Concerns, and Information Sources Reported by Parents of Young Children: Results From the 2009 HealthStyles Survey Allison Kennedy, Michelle Basket and Kristine Sheedy

Pediatrics 2011;127;S92

DOI: 10.1542/peds.2010-1722N originally published online April 18, 2011;





WHO MOST INFLUENCES ADULTS' DECISIONS TO GET IMMUNIZED?

Personal physician	69 percent
Family member	19 percent
Celebrity physician, public figure, other	7 percent
None of the above	4 percent
No answer	1 percent

Source: National Foundation for Infectious Diseases, 2009 National Adult Immunization Consumer Survey. In: Landers SJ. Physicians asked to persuade adults to get immunized. *American Medical News*. 2009. Available at: http://www.amednews.com/article/20090803/profession/308039978/7/. Accessed Feb. 17, 2014.





Pediatrics
May 2018
From the American Academy of Pediatrics
Article

Parent-Provider Communication of HPV Vaccine Hesitancy

Laura A. Shay, Austin S. Baldwin, Andrea C. Betts, Emily G. Marks, Robin T. Higashi, Richard L. Street Jr, Donna Persaud, Jasmin A. Tiro

...our exploratory analysis reveals that providers engaging hesitant parents and addressing their concerns can lead to same-day HPV vaccination.



- Motivational Interviewing for Vaccines
- C-A-S-E technique





Motivational Interviewing for Vaccines

J Health Commun. 2018;23(4):313-320. doi: 10.1080/10810730.2018.1442530. Epub 2018 Feb 23.

Improving Provider Communication about HPV Vaccines for Vaccine-Hesitant Parents Through the Use of Motivational Interviewing.

Reno JE¹, O'Leary S¹, Garrett K², Pyrzanowski J¹, Lockhart S¹, Campagna E¹, Barnard J¹, Dempsey AF¹.

Author information

Abstract

Human papillomavirus (HPV) vaccine uptake is below that of other routine adolescent vaccines. This is due in part to the fact that the HPV vaccine is often not routinely recommended by providers to all eligible adolescents. While providers' recommendations are crucial, even a strongly stated recommendation can be insufficient among HPV vaccine-hesitant parents. Providers must be prepared to respond to parental concerns following giving the recommendation for the HPV vaccine. This paper presents the analysis of implementation of an intervention aimed at improving provider communication with HPV vaccine-hesitant parents. Healthcare providers and staff at eight pediatric and family medicine clinics received communication training that included motivational interviewing (MI) techniques. Process evaluation in the form of serial surveys, as well as program evaluation in the form of focus groups with participating providers and staff, assessed the perceived efficacy of the intervention. Outcomes included time spent discussing the HPV vaccine during clinical visits, providers' self-efficacy for addressing parental HPV vaccine hesitancy, and their general perceptions of the effectiveness of MI techniques. Overall, findings indicate the intervention improved providers' communication with HPV vaccine-hesitant parents and providers reported the use of MI played a central role in improved HPV vaccine acceptance. Lessons learned and recommendations for future interventions are also discussed.



C-A-S-E Technique

- A new model for talking to parents
- A mnemonic to organize a rapid, useful response
- Draws from Aristotelian teaching on rhetoric
- Created by Alison Singer, MD
 - President, Autism Science Foundation
 - As taught by Dr. Robert Jacobson, MD Mayo Clinic

http://www.mnaap.org/pdf/Making_the_CASE_for_Vaccines_MNAAP.pdf





- Practice the technique to be able to rapidly, confidently address concerns
- Develop tools to support your technique
 - Myth prompts
 - Scripting





The C-A-S-E Acronym

- Corroborate
- About Me
- Science
- Explain/Advise



General Vaccine Myths

- Vaccines and Autism
- Vaccine Safety
- Vaccine(s) Too New
- Too Many Vaccines (Immune Overload Theory)
- Vaccine Preservatives
- Natural Disease Immunity is Better





HPV Vaccine Specific Myths

- HPV vaccine is too new*
- It's too early to give HPV vaccine
- Giving HPV vaccine early will lead to earlier sexual activity
- We are giving too many vaccines*
- There are toxic preservatives in vaccines*





HPV Vaccine Specific Myths

- HPV will cause... (safety concerns)*
- Boys don't need HPV vaccine
- HPV vaccine can cause HPV infection
- HPV is not effective
- It's better to get immunity by getting infected with HPV*





^{*}Overlap with general vaccine myths

Vaccine Hesitancy Summary

- Vaccine hesitancy can be overcome in a confident, time efficient way by:
 - Developing standardized office practices to help alleviate fear of pain, needle phobia
 - Practicing motivational interviewing or C-A-S-E technique
 - Using tools to support your technique including live prompts, scripting



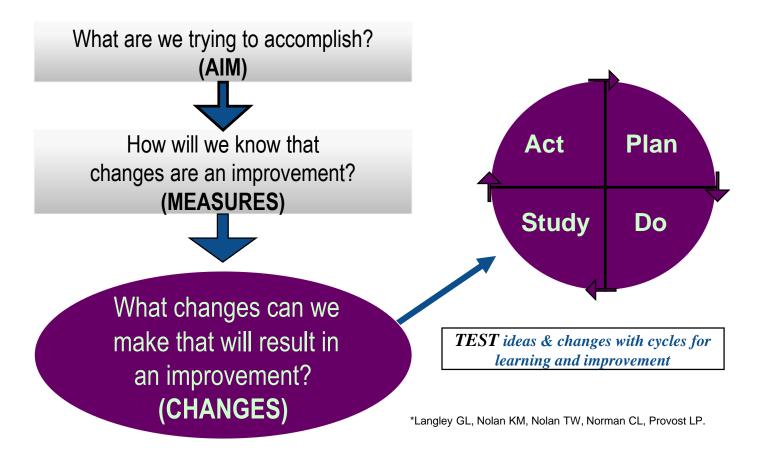


Top 10 Interventions

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The Model for Improvement





Specification

Denominator / Population:

- Male and females 13-18 years of age
- Live Patients with 1 Visit in 18 months prior to extract date
 - Visits with outpatient primary care department billing providers
 - Office or immunization visits with length >= 15 min

Numerator / Vaccine Identification:

- Count vaccine doses and intervals
- HPV 4 and HPV 9

Attribution:

EHR identified PCP and Department

Benchmark:

National Immunization Survey



Reporting

- Quarterly reporting
- Provider specific
- Department specific



The Gundersen Health System Experience

HPV Vaccine Rate Improvement



Alert, Reminder, Recall System

- Individual Provider Use
- Centralized Electronic Alerts and Reminders





Dear Guardian:

As part of our efforts to provide the best patient care, we review your records on a regular basis. We want to be sure all of our patients are up-to-date on clinic visits, labs, immunizations, and treatment goals. A recent review showed that is due or overdue for the following immunizations:

Topic

· Human Papillomavirus Vaccine (HPV) (1)

The recommended vaccines and number of doses by age 13 years are included below:

- DTP 5 or more doses of diphtheria and tetanus toxoids and pertussis vaccine, or diphtheria and tetanus toxoids (DTP/DT/DTaP).
- Polio 4 or more doses of poliovirus vaccine.
- MMR 2 or more doses of a measles-mumps-rubella vaccine.
- Hib 3 or more doses of Haemophilus influenzae type b (Hib) vaccine.
- Hep B 3 or more doses of hepatitis B vaccine.
- Var 2 or more doses of varicella vaccine received at or after age 12 months.
- PCV 4 or more doses of pneumococcal conjugate vaccine.
- Hep A 2 or more doses of Hepatitis A vaccine.
- MCV4 1 dose of meningococcal conjugate vaccine.
- Tdap 1 dose of booster of diphtheria and tetanus toxoids and pertussis vaccine.
- HPV 3 doses of human papilloma virus vaccine.

Please compare your home immunization records to the recommendations above and notify us if any discrepancies or call your primary care clinic and schedule an appointment to update immunizations. Please inform the scheduler you received this letter.

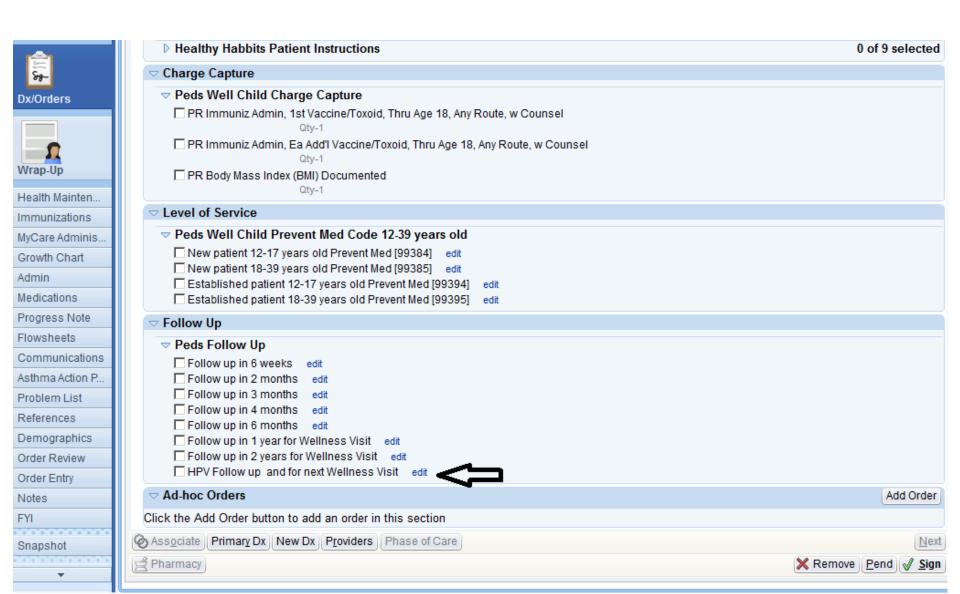
Sincerely,

The Medical Home of RAJIV NAIK, MD

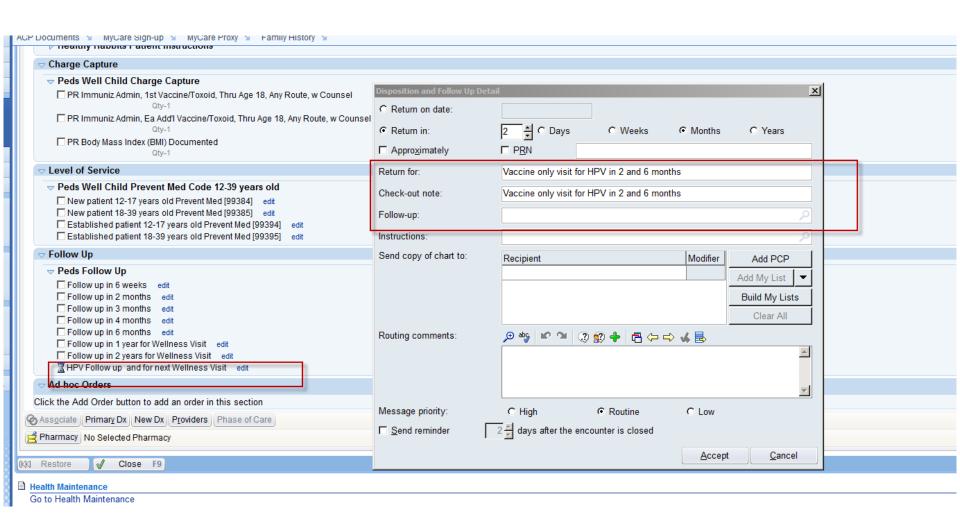
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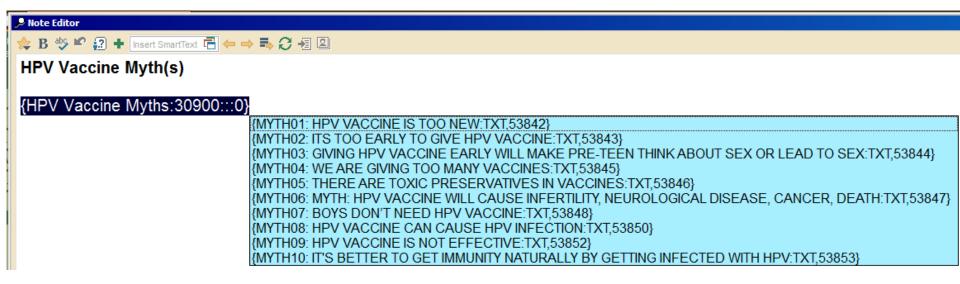


C-A-S-E Technique

- Training across regional GHS systems including:
 - Pediatrics
 - Family Medicine

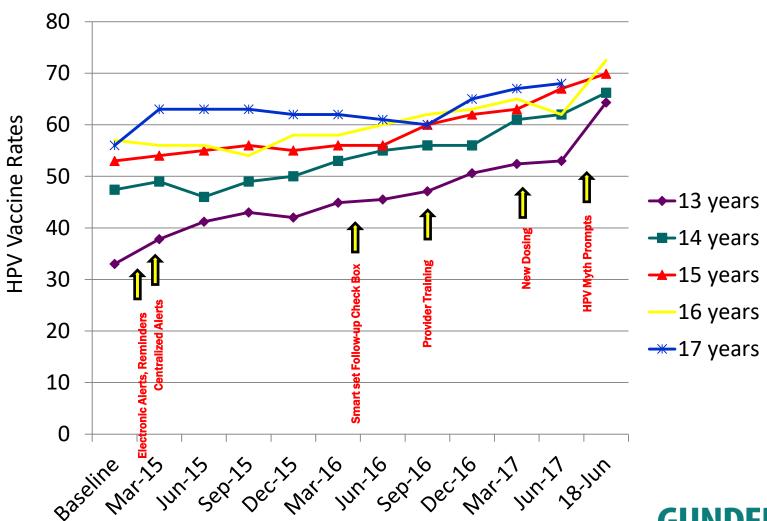


HPV Myth Prompts



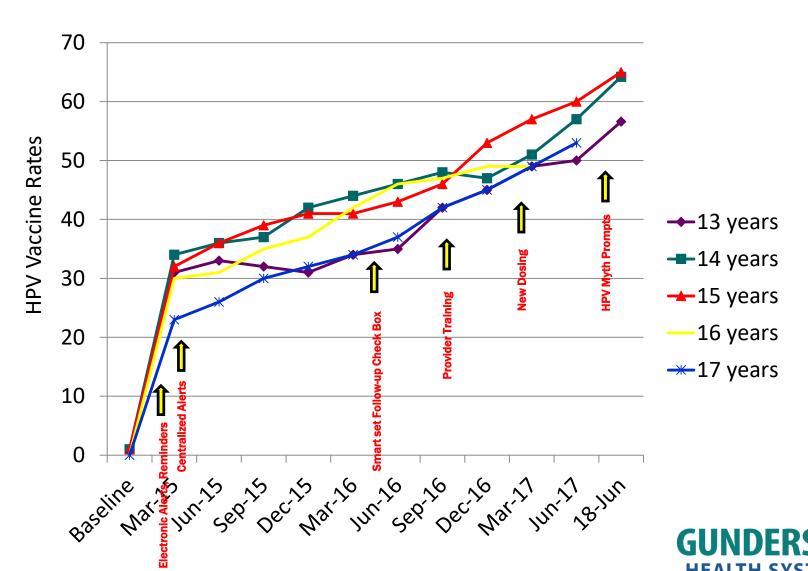


GHS HPV Completion Rates: Females New Dosing





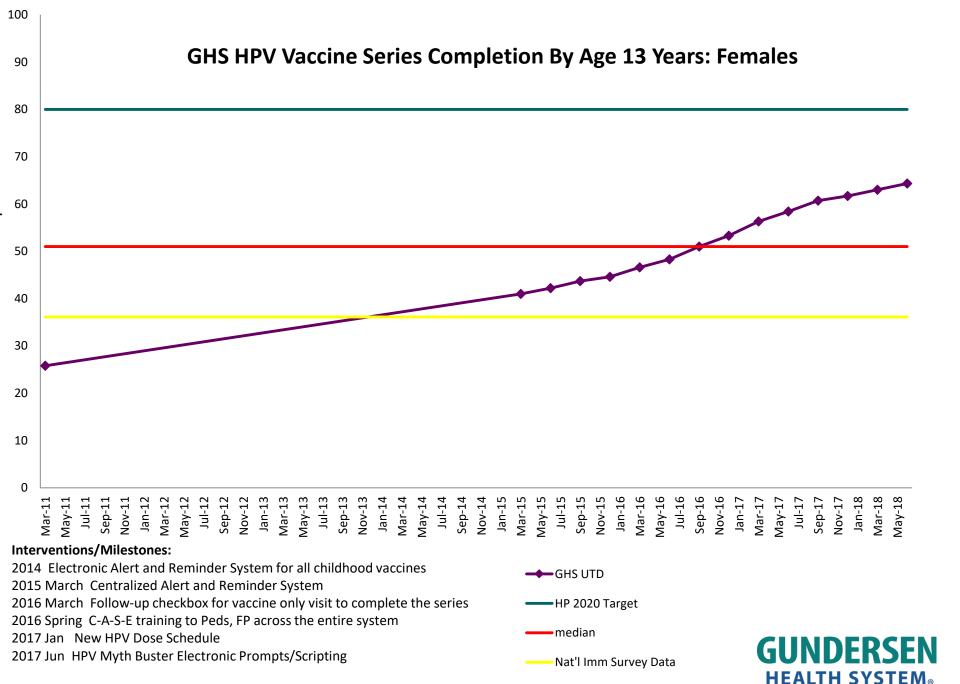
GHS HPV Completion Rates: Males New Dosing

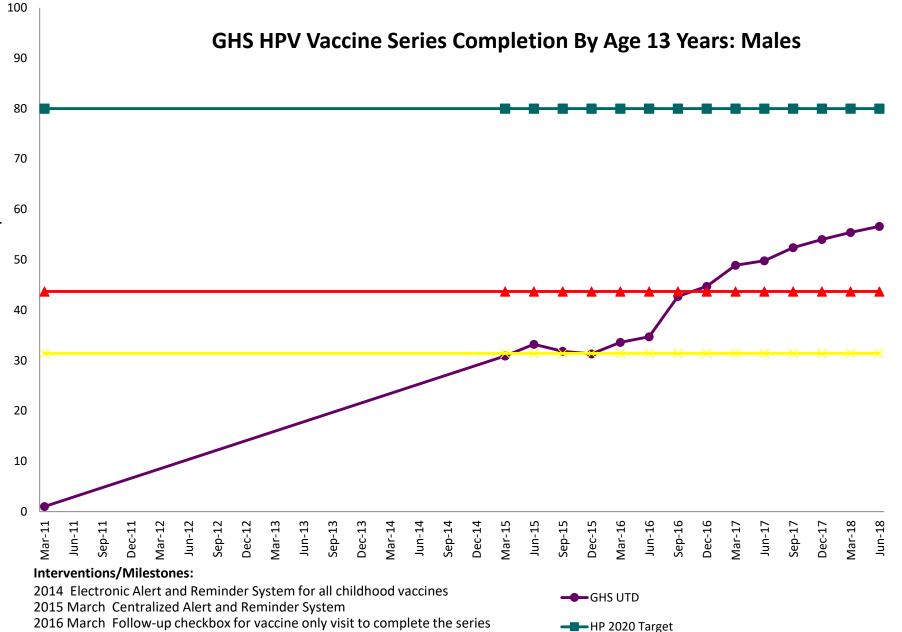


Other Interventions

- General Vaccine Myth Prompts (2018)
- Pay for performance (2018)
 - Individual HCP
 - Team-based
- Targeted intervention for low performers (future)
- Move routine age of HPV vaccine to age 9 years (future)
- Collaboration with other health care partners (future)







2016 March Follow-up checkbox for vaccine only visit to complete the series 2016 Spring C-A-S-E training to Peds, FP across the entire system 2017 Jan New HPV Dose Schedule 2017 Jun HPV Myth Buster Electronic Prompts/Scripting

Gunde 2018 Jam Start of Team Based Pay Föri Performance for childhood vaccine rates

median

Nat'l Imm Survey Data



Summary

- To improve HPV vaccination rates:
 - Identify the common barriers to HPV vaccination
 - Learn how to systematically improve HPV vaccine rates by overcoming common barriers
 - Be confident and persistent in your individual counseling
 - Use previously developed resources, tips, and toolkits to enhance your quality improvement efforts





Appendix: Toolkits and resources





American Cancer Society Toolkit



Steps for Increasing HPV Vaccination

in Practice

An Action Guide to Implement Evidence-based Strategies for Clinicians*

*Includes pediatricians, family physicians, general internists, obstetriciangynecologists, nurse practitioners, physician assistants, nurses, medical assistants, and their office managers





https://www.mysocietysource.org/sites/HPV/ResourcesandEducation/Lists/Clearinghouse/Attachments/217/Steps%20for%20Increasing%20HPV%20Vaccination%20in%20Practice.pdf





Increasing HPV Vaccination: An Overview

Step 1 Assemble a Team

Identify an HPV vaccination champion.

Form a quality improvement team for HPV vaccination.

- Identify clinical and non-clinical staff to serve as change agents.
- · Agree on team tasks.

Identify external organizations and resources to support your efforts.

Your clinic system may not initially tackle every step.

Steps 1-3 can help you build capacity to implement the evidence-based strategies in Step 4.

Consider starting with one or two strategies that are most realistic for your clinic.

Step 2 Make a Plan

Identify opportunities

inventory of HPV

and strategies.

Map your current

vaccination systems

vaccination process.

Share the results with

to increase HPV

Complete an

vaccination.

staff.

Step 3 Engage and Prepare All Staff

Engage all clinical and non-clinical staff in your efforts.

- Train all staff to ensure consistent, positive message delivery to parents and patients.
- Use human-interest stories to increase staff investment.

Determine baseline vaccination rates.

- Calculate rates for patients who have received vaccination for each HPV dose, Tdap, and Meningococcal by their 13th birthday.
- Improve accuracy of the baseline rates.

Design your clinic's HPV vaccination strategy.

- Choose multiple strategies that build on past quality improvement successes.
- Create an HPV vaccination policy.
- Incorporate staff feedback into strategy design and implementation.

Prepare the clinic system.

- Modify your EHR system to accommodate the needs of your plan.
- Ensure your vaccine supply and storage needs are met.

Prepare the parent and patient.

 Provide targeted education materials.

Prepare the clinicians.

- Train clinicians on how to effectively communicate with parents and patients.
- Provide targeted provider education materials.

Step 4
Get Your Patients
Vaccinated Before
Their 13th Birthday

Make an effective recommendation.

 Recommend the HPV vaccine for all boys and girls at 11 or 12 years of age the same day and same way you recommend other vaccines.

Prompt the health care provider.

 Ensure clinicians know that a specific patient is due or overdue for HPV vaccination.

Increase access.

- Incorporate standing orders into clinic procedures.
- Provide walk-in or immunization-only appointments.

Track series completion and follow-up.

 Remind parents when it's time for the next dose of vaccine or when the vaccine is overdue for their child.

Measure and improve performance.

- Conduct PDSA cycles.
- Measure the number of missed opportunities.
- Ensure that providers know their individual rates.



Steps for Increasing HPV Vaccination

in Practice

An Action Guide to Implement Evidence-based Strategies for Clinicians*

*Includes pediatricians, family physicians, general internists, obstetriciangynecologists, nurse practitioners, physician assistants, nurses, medical assistants, and their office managers



Vaccinate Adolescents against Cancers



GUNDERSEN HEALTH SYSTEM®

AAP HPV Champion Toolkit



Early Career

Pediatric Trainees

Medical Students

International

HealthyChildren.org

DEDICATED TO THE HEALTH OF ALL CHILDREN'

Professional Resources

Hub and Spoke Initiative

HPV Vaccine Resources

Professional Education

Advocacy & Policy shopAAP

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AAP.org > Advocacy & Policy > AAP Health Initiatives > Immunizations > HPV Champion Toolkit

HPV VACCINE IS CANCER PREVENTION HPV **HPV Champion Toolkit**

Change Template on HPV Vaccine HPV Champion Toolkit

This toolkit has the best resources available to help you:

- · Educate other healthcare professionals
- Discuss HPV vaccination with parents
- Make necessary changes in your practice to improve HPV vaccination rates.

By focusing on ways you can make changes that will lead to improved HPV vaccination rates, YOU are an HPV champion.

https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/immunizations/HPV-Champion-Toolkit/Pages/HPV-Champion-Toolkit.aspx

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CDC HPV Vaccination Toolkit

Human Papillomavirus (HPV)



Related Links

Immunization Partners

CDC > HPV Home

For Partners, Awardees, and State Programs



This toolkit provides resources for state and local organizations interested in enhancing HPV vaccination efforts at the clinician, patient, and partnership level.



https://www.cdc.gov/hpv/partners/index.html



NIPA HPV Toolkit

National Immunization Partnership with the APA (NIPA):
Improving HPV Immunization Rates in Practice-Based Settings
Virtual Toolkit







HPV Vaccination

- HPV Information
 - Morbidity and Mortality Weekly Report: 2-dose
 - CDC slideset: You are the Key to HPV Cancer Prevention CDC
 - · Toolkit: HPV Champion Toolkit AAP
 - Webcast: Immunizations for Adolescents: Improve Rates, Improve Outcomes AAFP Members Only
 - Handout: The HPV Vaccine: What Health Care Providers Need to Know CA Dept of Public Health
 - Handout: HPV VACs Myth Busting ACS
 - HPV Vaccine Information Statements Gardasil , Cervarix CDC
 - Recommendations: Vaccination Schedule CDC
 - Study: Human Papillomavirus Vaccination Coverage Among Female Adolescents in Managed Care Plans - MMWR
 - · Website: HPV for Clinicians CDC
- Website: FAQ about HPV Vaccine Safety CDC
- · Study: HPV Sharply Reduced in Teenage Girls Following Vaccine, Study Says NY Times
- Morbidity and Mortality Weekly Report: Human Papillomavirus-Associated Cancers United States, 2008-2012
- Webinar: PDF of HPV Vaccine Safety CDC
- Morbidity and Mortality Weekly Report: National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13-17 Years - United States, 2015

http://www.academicpeds.org/niPA/index.cfm?page=HPV_vaccination



Epic Users

- Gundersen Health System: Epic Clinical Program for "Comprehensive Program for HPV Vaccine Improvement"
 - This program is available to members of the Epic community in the Foundation System. Epic community members can download this program and have Epic staff install it as part of Epic's Services. If you're interested, please contact

programservices@epic.com.







▼Improving HPV Immunization Rates in Children and Adolescents

Version Neutral · Clinical and Financial Pro... EpicCare Ambulatory, Healthy Planet

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Executive Overview

- ▶ Workflow
- Considerations
- ▶ Build Information Validate Your Build

Training

Reporting

Appendix: Sample SQL Query -Overdue Immunizations Report Appendix: Sample SQL Query -Upcoming Age Thirteen Report Appendix: Sample SQL Query -Upcoming Age Eighteen Report Appendix: HPV Myths SmartText

Improving HPV Immunization Rates in Children and Adolescents

Rajiv Naik 🔻

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As always, remember your responsibilities for safe use of the software. Last Significant Update: 02/06/18

Primary Products	EpicCare Ambulatory, Healthy Planet
Versions	Epic 2015 and forward
Core Epic Tools	Reporting Workbench, SmartSets, SmartLists
Last Updated	February 7, 2018

Executive Overview



48% increase in HPV immunization rate

Human papillomavirus (HPV) is the most common sexually transmitted infection in the world and can cause cervical, vaginal, vulvar, penile, anal, and throat cancers (1). To prevent infection, the CDC recommends that all children receive a series of HPV immunizations at age 11 or 12 (2), and Health People 2020's target immunization rate for HPV immunization for both boys and girls between the ages of 13 and 15 is 80% (3). Despite this recommendation, however, only 43% of American teens are up-to-date on their recommended HPV immunizations (4).

There are several reasons why patients might not complete the HPV vaccine series:

- Missed opportunities to immunize. HPV immunization requires a series of two or three vaccines over several months to be effective. Patients who
 receive the first dose of the vaccine might not make and keep appointments for the second and third dose. Clinics might not have standardized
 scheduling practices for return visits to complete the series of vaccine doses. Providers might also fail to identify patients who are due for HPV
 vaccines when the patient presents for a non-wellness visit. All these factors can contribute to incomplete vaccination, which leaves teenagers
 unprotected.
- Patient or family hesitancy to immunize. There are many misperceptions about vaccines in general, but myths are especially common around the HPV vaccine. For example, parents might mistakenly believe that the vaccine is ineffective, too new to be trusted, or not necessary for boys.
- Provider hesitancy to immunize. Providers might be hesitant to recommend HPV vaccination because they hold misperceptions about the vaccine, they lack the necessary training to engage patients and families in discussions that dispel myths, or they fear that discussing the vaccine is too

Vaccine "Myth Busters"

- HPV Myths (in handouts)
- General Vaccine Myths (in handouts)
- Or contact Email: rmnaik@gundersenhealth.org



App Store

